1. Apparatus for relieving zygopophysial joint related pain, comprising:

a stimulator coupled to a plurality of electrodes, each electrode being adapted for placement immediately adjacent to a medial branch of a spinal nerve root,

the stimulator including:

a controller operative to generate a series of pulses of sufficient electrical intensity to cause stimulation of a given medial branch and its articular branches, but not so strong as to depolarize or hyperpolarize the spinal cord itself, and

operator interface enabling the series of pulses to be tailored as a function of requisite pain relief.

2. The apparatus of claim 1, wherein the stimulator is sealed within an enclosure suitable for implantation.

3. The apparatus of claim 1, wherein the controller is coupled to a second set of electrodes to sense myoelectrical activity generated by the muscles surrounding the medial branch, and wherein the controller is programmed modulate the impulses generated by the stimulator in accordance with the demands of the individual.

4. The apparatus of claim 1, wherein the plurality of electrodes

includes at least one positive electrode and more than one negative electrode, the negative electrodes each adapted for placement immediately adjacent to the medial branch of a spinal nerve root, the stimulation of the given medial branch and its articular branches being depolarization of the given medial branch and its articular branches.

5. The apparatus of claim 1, wherein the plurality of electrodes includes at least one negative electrode and more than one positive electrode, the positive electrodes each adapted for placement immediately adjacent to the medial branch of a spinal nerve root, the stimulation of the given medial branch and its articular branches being hyperpolarization of the given medial branch and its articular branches.

6. The apparatus of claim 1, wherein the series of pulses is a series of negative electrical pulses.

7. The apparatus of claim 1, wherein the series of pulses is a series of positive electrical pulses.

8. A method of relieving zygopophysial joint related pain, comprising the steps of:

providing a stimulator coupled to a plurality of electrodes;

placing each electrode immediately adjacent to a medial branch of a

spinal nerve root; and

generating a series of pulses sufficient to stimulate the medial branch and its articular branches, but not so intense as to spread to the spinal cord itself.

9. The method of claim 8, further including the step of tailoring the pulses to suit the demands of a user of the stimulator.

10. The method of claim 8, further including the steps of:

sensing the myoelectrical activity generated by the muscles surrounding the medial branch, and

tailoring the pulses in accordance with the myoelectrical activity.

11. The method of claim 8, further including the step of implanting the stimulator and electrodes beneath the skin.

12. The method of claim 8, further including the step of placing the electrodes under the skin.

13. Apparatus for relieving pain, comprising:

a stimulator coupled to a plurality of electrodes, each electrode being adapted for placement relative to a nerve,

the stimulator including:

a controller operative to generate a series of positive electrical pulses

of sufficient electrical intensity to cause hyperpolarization of the nerve, but not so strong as to spread to the spinal cord itself, and

an operator interface enabling the series of pulses to be tailored as a function of requisite pain relief.

14. A method of ameliorating pain and treating vascular disorders, comprising the steps of:

providing a neural stimulator having one negative electrode and one or more positive electrodes;

placing at least one of the positive electrodes in close proximity to a peripheral nerve or portion of the autonomic nervous system external to the spinal column of a patient being treated;

placing the negative electrode remotely from the positive electrode in a region of low sensitivity; and

providing sufficient energy through the stimulator to hyperpolarize the peripheral nerve or portion of the autonomic nervous system.

15. The method of claim 14, including the step of placing at least one of the positive electrodes proximate to the sciatic nerve.

16. The method of claim 14, including the step of placing the negative electrode in the adipose tissue.

17. The method of claim 14, including the step of placing at least one of the positive electrodes under the skin immediately adjacent the peripheral nerve or portion of the autonomic nervous system.

18. The method of claim 14, including the step of placing the negative electrode under the skin.

19. The method of claim 14, including the step of placing the stimulator under the skin.

20. The method of claim 19, wherein the stimulator is placed in the superior buttock region of the patient.

21. The method of claim 14, further including the step of adjusting a characteristic of energy provided by the stimulator as a function of the needs of the patient.

22. The method of claim 21, wherein the adjusted characteristic is the pulse frequency of the stimulator.

23. The method of claim 21, wherein the adjusted characteristic is the pulse width of the stimulator.

24. The method of claim 21, wherein the adjusted characteristic is the pulse amplitude of the stimulator.

25. A method of ameliorating pain and treating vascular disorders, comprising the steps of:

providing a neural stimulator having one negative electrode and one or more positive electrodes;

placing at least one of the positive electrodes under the skin of a patient immediately adjacent the sciatic nerve;

placing the negative electrode under the skin of the patient in the adipose tissue at a site remote from the positive electrode; and

providing sufficient energy through the stimulator to hyperpolarize the sciatic nerve.

26. The method of claim 25, including the step of placing the stimulator under the skin in the superior buttock region of the patient.

27. The method of claim 25, further including the step of adjusting the pulse frequency, pulse width, or the pulse amplitude of the stimulator as a function of patient need.